is over £250m annually, of which 22% goes on research into treatment[1] and much of this is disproportionately channelled into "high profile" cancers such as breast, prostate, and leukaemia.[2] Rare cancers with poor prognosis are frequently overlooked.

We found that even when a trial was available eligibility criteria excluded over half of patients. It is a common criticism that the outcomes of trials for new treatments are superior to those subsequently encountered in standard clinical practice. Trials with broad entry criteria that better reflect everyday life will help with recruitment of patients[3] and probably yield more meaningful results.

Several national trials were not open for accrual in our research network because of lack of available service support and treatment costs. Although trusts are duty bound to provide support, our local research and development budgets are insufficient to meet the needs, while commissioners are in no financial position to be prioritising research over service needs. The onus must be on funding bodies and principal investigators of new trials to ensure adequate resourcing from the outset.

Finally, of those patients who were approached to enter a trial, one in five declined. Little is known about the factors that influence men and women to take part in clinical trials.[4] There is much scope to involve consumers more actively in clinical research and encourage a partnership approach to improving cancer care.

We thank all nurses, clinicians, and other support staff of the West Anglia cancer research network involved in the conduct of cancer clinical trials. We especially thank those patients who agreed to take part in a trial.

Contributors: PC and JS were responsible for designing the study. JS analysed the data. PC interpreted the results, prepared the manuscript, and is guarantor. RH contributed to writing the report.

Funding: None.

Competing interests: None declared.

Ethical approval: All trials had local research ethics committee approval.

1 National Cancer Research Institute. *Strategic analysis. An overview of cancer research in the UK directly funded by the NCRI partner organisations.* London: NCRI, October 2002.
2 Kmietowicz Z. Research spending on cancers doesn't match their death rates. *BMJ* 2001;325:920.
3 Baum M. The ATAC (arimidex, tamoxifen, alone or in combination) adjuvant breast cancer trial in postmenopausal patients: factors influencing the success of patient recruitment. *Eur J Cancer* 2002;38:1684-6.
4 Comis RL, Miller JD, Aldige CR, Krebs L, Stoval E. Public attitudes toward participation in cancer clinical trials. *J Clin Oncol* 2003;21:830-5.

*(Accepted 27 May 2003)*

# Effect of national guidelines on prescription of methadone: analysis of NHS prescription data, England 1990-2001

John Strang, Janie Sheridan

Though there is strong evidence to support the use of methadone maintenance for opiate addiction[1] it is often delivered poorly. Evidence based guidelines were developed in 1996 and 1999 (see www.doh.gov.uk/drugdep.htm and further details on bmj.com) and widely publicised in the United Kingdom.[2 3] In 1998 we found scant evidence of any impact[4] and concluded that "if planners are awaiting major change in methadone prescribing as a result of central exhortation, they should not hold their breath." However, perhaps guidelines may have a slower cumulative effect.

## Method and results

We examined data on all NHS methadone prescriptions dispensed by community pharmacists in England. These account for 98% of methadone prescriptions in England.[5] Unpublished commercial data indicate that 95% of methadone prescriptions from general practitioners are for addiction treatment (IMS Health).

To investigate the impact of the guidelines we used two specific recommendations from the Department of Health (the 1996 taskforce report and the *Orange Guidelines* 1999): firstly, that prescribing of methadone in tablet form should cease (based on concerns about intravenous misuse), and, secondly, that injectable methadone (methadone ampoules) should not be prescribed as mainstream treatment. We examined the proportion of methadone prescriptions per year issued as oral syrup, tablets, or injectable ampoules to identify any change of professional practice.

We examined the six years preceding 1996 (1990-5) to establish prevailing trends in methadone prescribing and then the six years during which the new guidelines were introduced (1996-2001) to study any change. Between 1990 and 2001, NHS prescriptions for methadone dispensed in England tripled—from 425 400 to 1 318 100 annually—increasing every year. However, the proportionate annual increase fell from 15.3%, 23.8%, and 21.1% (first three years) down to increases of 2.7%, 3.6%, and 3.8% (last three years) (table).

Over the six year baseline period (1990-5), the proportion of methadone prescriptions prescribed as tablets was steady at between 7.8% and 9.8% annually. Thereafter, the proportion steadily reduced (1% per annum) to 4.0% by 2001, and the absolute number also fell every year. Similarly, prescriptions for injectable methadone were stable for 1990-5 (range 8.0% to 9.7%, peaking at 9.7% in 1994) but steadily reduced thereafter, from 8.7% in 1995 to 3.9% in 2001. From 1997 the absolute number of prescriptions as ampoules fell annually.

## Comment

Over the past decade, the extent of methadone prescribing in England has tripled, deriving from a

*See also* p 310

National Addiction Centre (Maudsley/Institute of Psychiatry), London SE5 8AF
John Strang *professor of the addictions*
Janie Sheridan *research worker in the addictions*
Correspondence to: J Strang
j.strang@iop.kcl.ac.uk

*BMJ* 2003;327:321–2

*See bmj.com for details of the national guidance*

Total annual number of NHS methadone prescriptions in England (total and by type), 1990-2001

| NHS methadone prescriptions (× 1000) | 1990 | 1991 | 1992 | 1993 | 1994 | 1995 | 1996 | 1997 | 1998 | 1999 | 2000 | 2001 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Total annual number | 425.4 | 490.5 | 607.0 | 735.1 | 846.0 | 970.9 | 1076.1 | 1163.2 | 1192.7 | 1225.3 | 1269.7 | 1318.1 |
| Absolute annual increase on previous year (% increase) | 105.2 (32.9) | 65.1 (15.3) | 116.5 (23.8) | 128.1 (21.1) | 110.9 (15.1) | 124.9 (14.8) | 105.2 (10.8) | 87.1 (8.1) | 29.5 (2.5) | 32.6 (2.7) | 44.4 (3.6) | 48.4 (3.8) |
| No of prescriptions as linctus or oral mixtures (% of annual total) | 348.2 (81.9) | 410.1 (83.6) | 500.3 (82.4) | 602.4 (81.9) | 686.4 (81.1) | 790.5 (81.4) | 894.1 (83.1) | 984.6 (84.6) | 1025.8 (86.0) | 1084.0 (88.5) | 1146.4 (90.3) | 1211.5 (91.9) |
| No of prescriptions as tablets (% of annual total) | 41.8 (9.8) | 38.3 (7.8) | 47.7 (7.9) | 62.4 (8.5) | 77.3 (9.1) | 94.9 (9.8) | 97.8 (9.1) | 88.8 (7.6) | 80.4 (6.7) | 69.3 (5.7) | 61.5 (4.8) | 52.6 (4.0) |
| No of prescriptions as ampoules (% of annual total) | 35.4 (8.3) | 39.0 (8.0) | 54.5 (9.0) | 70.1 (9.5) | 81.7 (9.7) | 84.2 (8.7) | 83.1 (7.7) | 85.8 (7.4) | 83.1 (7.0) | 69.2 (5.6) | 59.6 (4.7) | 51.3 (3.9) |

substantial year on year increase that was greatest during the first half of the 1990s. Every year community pharmacies across England dispense over 1.25 million NHS prescriptions for methadone, suggesting that about 50 000 opiate addicts are receiving methadone at any one time.

Since 1996 there has been a profound change in national practice regarding methadone prescribing in the directions proposed by the new national recommendations.[2 3] Over six years (1996 compared with 2001) the proportions prescribed as tablets (from 9.8% to 4.0%) and as injectable ampoules (from 8.7% to 3.9%) have halved, contrasting with the predominantly steady state of the preceding six year period.

Our data constitute objective evidence that the widespread publishing of national guidelines was followed by major change in national patterns of prescribing, with change occurring gradually and, at least in this instance, still accumulating after six years. We conclude that the eventual impact of national guidance will be substantial; change is not immediate and may take several years; and researchers and planners should not make premature judgment.[4]

The aggregated raw data on NHS prescriptions for methadone dispensed by community pharmacists were provided by the Statistics Division 1E, Department of Health, England. We thanks IMS Health for providing data on the proportion of methadone prescriptions prescribed as addiction treatment.

Contributors: JS conceived the idea for the examination. Data were obtained by both JS and JSh. JS undertook the data scrutiny and prepared the first draft of the manuscript. Both JS and JSh worked on the final version. JS is the guarantor.

Funding: None.

Competing interests: Both authors contributed to the 1996 Task Force report and were members of the working group (chaired by JS) that prepared the 1999 Department of Health's *Drug Misuse and Dependence: Guidelines on Clinical Management* (Orange Guidelines).

1 Ward J, Hall W, Mattick R. Role of maintenance treatment in opioid dependence. *Lancet* 1999;353:221-6.
2 Keen, J. Managing drug misuse in general practice: new Department of Health guidelines provide a benchmark for good practice. *BMJ* 1999;318:1503-4.
3 Gabbay M, Carnwath T. A cautious welcome for the new guidelines on management of drug dependence. *Br J Gen Pract* 2000;50:92-3.
4 Strang J, Sheridan J. Effect of government recommendations on methadone prescribing in south east England: comparison of 1995 and 1997 surveys. *BMJ* 1998;317:1489-90.
5 Strang J, Sheridan J, Barber N. Prescribing injectable and oral methadone to opiate addicts: Results from the 1995 national survey of community pharmacies in England and Wales. *BMJ* 1996;313:270-2.

*(Accepted 23 May 2003)*

## Ethnic mix

Regulations regarding the composition of interview panels may prove to be a surprising force for integration, but in a slightly different way than intended. There has been substantial restructuring of hospital establishments over the past nine months. Medical superintendents have been replaced by hospital managers, along with medical, nursing, human resources, financial, and systems managers. All these new posts have to be advertised, and applicants interviewed, for which an interview panel is needed.

The regulations for KwaZulu-Natal Department of Health state that the panel should consist of five members, of which a minimum of three should be African and the remaining seats occupied by two other races (usually a choice of Indian, coloured, or white). My hazy mathematics suggested that the number of three Africans was also a maximum, but let that be. The panel should also have a sex mix of three of one and two of the other. Also everyone on the panel must be of at least the same level as the post being interviewed for. Trying to find a panel to comply with the regulations can be quite a task.

Our human resources manager recently complained that he could not get a pharmacist for the panel to interview for a pharmacy manger. The pharmacist had to be level 11 or above (which is fairly high up the scale), and the Durban pharmacists he had spoken to refused to come all the way into the Ingwavuma bush. Asking our own pharmacist proved to be a quick route to a helpful senior pharmacist. I spoke to him on the telephone, and he agreed to attend. "I am also black," he said proudly. Laughing, I replied that I had only been told that he needed to be a pharmacist level 11, but being black might come in useful.

About six weeks later our dogged human resources manager mentioned that he had also failed to find an Indian. I telephoned a colleague at the wrong end of the province intending to ask for a contact nearer home, but she kindly offered to fill in herself.

In the other direction, I have recently had a couple of requests from hospitals looking for a white person, and it is actually rather nice that one's ethnic group should be useful to someone. Today, the hospital manager in Nongoma, Mrs Ndlovu, said plaintively, "We have plenty of Africans and Indians, but no white people."

It is something like a grown up version of trading bubblegum cards. Everyone wants a complete set, and no part of the set is better than the others.

Hervey Vaughan Williams *medical manager, Mosvold Hospital, Ingwavuma, South Africa*

We welcome articles up to 600 words on topics such as *A memorable patient, A paper that changed my practice, My most unfortunate mistake,* or any other piece conveying instruction, pathos, or humour. If possible the article should be supplied on a disk. Permission is needed from the patient or a relative if an identifiable patient is referred to.